



Department
for Education

Consultation Response Form

Consultation closing date: 8 August 2013
Your comments must reach us by that date

**National curriculum review: new
programmes of study and attainment
targets from September 2014**

If you would prefer to respond online to this consultation please use the following link: <https://www.education.gov.uk/consultations>

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes, primarily the Freedom of Information Act 2000 and the Data Protection Act 1998.

If you want all, or any part, of your response to be treated as confidential, please explain why you consider it to be confidential.

If a request for disclosure of the information you have provided is received, your explanation about why you consider it to be confidential will be taken into account, but no assurance can be given that confidentiality can be maintained. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

The Department will process your personal data (name and address and any other identifying material) in accordance with the Data Protection Act 1998, and in the majority of circumstances, this will mean that your personal data will not be disclosed to third parties.

Please tick if you want us to keep your response confidential.	<input type="checkbox"/>
Reason for confidentiality:	
Name: Tony Cotton (ATM Hon Sec), Adam McBride (MA Chair of Council)	
Please tick if you are responding on behalf of your organisation.	<input checked="" type="checkbox"/>
Name of Organisation (if applicable): Association of Teachers of Mathematics (ATM) and The Mathematical Association (MA)	
Address: Association of Teachers of Mathematics, Unit 7 Prime Industrial Park, Shaftesbury Street, Derby, DE23 8YB Email: tonycotton@atm.org.uk Mathematical Association, 259 London Road, Leicester LE2 3BE Email: a.c.mcbride@strath.ac.uk	

If your enquiry is related to the DfE e-consultation website or the consultation process in general, you can contact the Ministerial and Public Communications Division by e-mail: consultation.unit@education.gsi.gov.uk or by telephone: 0370 000 2288 or via the Department's ['Contact Us'](#) page.

Please mark the box that best describes you as a respondent.

<input type="checkbox"/> Maintained primary school	<input type="checkbox"/> Maintained secondary school	<input type="checkbox"/> Special school
<input type="checkbox"/> Academy/free school	<input checked="" type="checkbox"/> Subject association	<input type="checkbox"/> Governing body
<input type="checkbox"/> Parent	<input type="checkbox"/> Young person	<input type="checkbox"/> Higher Education
<input type="checkbox"/> Employer/business sector	<input type="checkbox"/> Local Authority	<input type="checkbox"/> Organisation representing school children
<input type="checkbox"/> Organisation representing school teachers	<input type="checkbox"/> Other	

Please Specify:

This response has been compiled by members of the Association of Teachers of Mathematics (ATM) and The Mathematical Association (MA) including the 65 members of the Joint Association of Teachers of Mathematics (ATM) and The Mathematical Association (MA) Primary Expert Group and has been approved by the councils of both associations.

1 Do you have any general comments on the draft Order?

Yes

No

Comments: We regret how little notice has been taken of the detailed feedback urging government to reconsider its proposals and to take more time over the curriculum development.

2 Do you have any comments on the revised draft programmes of study or attainment targets for English?

Yes

No

Comments:

3 Do you have any comments on the revised draft programmes of study or attainment targets for mathematics?

Yes

No

Comments:

Much of what we have sent in previous responses, including detailed references to evidence, and through our meeting with Ms Truss MP, relates to this latest draft also.

We note that the reference to calculators and technology in the numeracy statement (pg. 9) has been removed. We consider this a retrograde step.

In summary:

Purpose of Study (pg. 88)

We are pleased to see the addition of “an appreciation of the beauty and power of mathematics” identified as an attribute of high quality mathematics education. It is a simple appreciation of the beauty and power of mathematics, when it is first introduced to young children, that is likely to inspire them to study it further. This is repeated with increasing sophistication all the way through their school years.

The Aims (pg. 88)

We are concerned that the order of the aims suggests a hierarchy with fluency in procedures being of greater importance and a prerequisite for problem solving and reasoning. We would also question the implication that frequent practice leads to conceptual understanding.

That said, we broadly support the aims and believe that if teachers take notice of them, they provide a sound basis upon which to build a school curriculum and classroom practice. However, the statutory content itself makes no reference to the aims and as it is highly likely that a busy practitioner will simply turn to the page in the curriculum for their year group, they will completely miss the essential key messages that sit within the aims. Therefore, we recommend that the aims are made more explicit within the statutory content for each year group and that there is further guidance related to developing reasoning and problem solving skills. If the preamble for each key stage was related to the aims (as for key stage three) this might assist primary teachers.

The Non-Statutory Guidance (pg. 91 – 129)

We welcome much of what appears in the non-statutory guidance and recognise that many teachers will find this useful. Based on research evidence and professional experience we do not think that Appendix 1 (pg. 128 – 129) is at all helpful in supporting children’s conceptual understanding of calculation. In fact if teachers are to be given the freedom to teach as they see fit the appendix is extremely restrictive in its current form.

We recommend that the appendix, in its current form, be removed.

If the appendix is to remain there are some essential changes to be made. Firstly there should be a greater emphasis on problem solving and reasoning using a range of calculation strategies including mental methods as a first resort, and efficient use of technology. In addition:

- The correct title of Addition, Subtraction, Multiplication and Division is needed
- Identical subtractions should be exemplified to show how different methods are applied to the same calculation and no boxes should be used within these calculations
- A less confusing font should be used
- A simple multiplication in which multiplication by the tens digit first is included
- No examples of short division by a number greater than 12 should be included

The appendix should be enhanced as described above and by incorporating a range of methods that could be taught; front-end addition, subtraction by complementary addition, multiplication by partial products (i.e. formalised grid method), and using equivalent fractions to simplify and complete division. These methods develop number sense and in the case of the grid method lead into some useful algebraic tools.

The Content

We echo the concerns from the initial consultation that the draft has confused "raising standards" with merely "setting the bar high".

The goal should be to set the bar "slightly higher" and at a level to which ordinary students and teachers "can aspire". Then to provide the necessary support and encouragement to enable most to attain this new level.

We see no evidence that the government recognises the dangers of "raising the bar" in a way that leaves teachers and school leaders believing they have to force students to grapple with material for which they are ill-prepared. In mathematics this does serious damage from which students almost never recover.

We welcome the change to the language surrounding calculation where "the efficient written method" has become "formal written method". There is still an unfortunate emphasis on children being competent in written procedures which should not be the main thrust of a curriculum for the 21st century. It is very important that children have a strong sense of whether the outcome of a calculation makes sense and they need to know how to 'round' numbers and 'approximate' as part of this.

We welcome the statement about enrichment rather than acceleration being desirable for high attainers (pg. 88). We are concerned that low attainers may be seen as merely needing "additional practice".

It would be helpful if the lines of progression were demonstrated more clearly. For

example, how do the mental calculation strategies suggested for Y4 (pg. 107 – 109) build on those for Y3 and what is the prerequisite knowledge to be able to access the statistics teaching in Y5 (pg. 120)? The development of algebraic and proportional reasoning through the primary phase is not clear. We note that there is nothing for Position and Direction in the Y3 programme of study which makes meaningful progression and building on prior learning extremely challenging between Y2 and Y4 for this topic. Explicit lines of progression could also show how the curriculum in KS3 develops from that in Y6, which would support teachers in planning for appropriate transition between key stages.

It might be helpful if the statutory content was numbered in some way.

We welcome realistic raised expectations. But we are concerned that unrealistic expectations and premature formalisation will result in children being expected to implement procedures too soon, which has highly negative consequences in mathematics, and which will result in children being labelled as failures from an early age

We are disappointed to see that the references to the use of ICT and calculators within the main part of the curriculum and the mathematics programmes of study have not been expanded and improved in light of our comments (in earlier responses and in meetings) about the benefits of using such tools throughout the primary school. We believe that such tools are valuable in developing conceptual understanding of number at all stages in a child's development, and should not be reserved only when "written and mental arithmetic are secure".

Please contact us if we can be of any assistance, if you require clarification of any of our comments, or if you would like a further meeting with representatives from the associations. We are very keen to support the DfE in making the mathematics programmes of study as good as possible.

4 Do you have any comments on the revised draft programmes of study or attainment targets for science?

Yes

No

Comments:

5 Do you have any comments on the revised draft programmes of study or attainment targets for art and design?

Yes

No

Comments:

6 Do you have any comments on the revised draft programmes of study or attainment targets for citizenship?

Yes

No

Comments:

7 Do you have any comments on the revised draft programmes of study or attainment targets for computing?

Yes

No

Comments:

8 Do you have any comments on the revised draft programmes of study or attainment targets for design and technology?

Yes

No

Comments:

9 Do you have any comments on the revised draft programmes of study or attainment targets for geography?

Yes

No

Comments:

10 Do you have any comments on the revised draft programmes of study or attainment targets for history?

Yes

No

Comments:

11 Do you have any comments on the revised draft programmes of study or attainment targets for languages?

Yes

No

Comments:

12 Do you have any comments on the revised draft programmes of study or attainment targets for music?

Yes

No

Comments:

13 Do you have any comments on the revised draft programmes of study or attainment targets for physical education?

Yes

No

Comments:

14 Please let us have your views on responding to this consultation (e.g. the number and type of questions, whether it was easy to find, understand, complete etc.).

Comments:

Thank you for taking the time to let us have your views. We do not intend to acknowledge individual responses unless you place an 'X' in the box below.

Please acknowledge this reply.



E-mail address for acknowledgement: adminmanager@atm.org.uk;
senioradministrator@m-a.org.uk

Here at the Department for Education we carry out our research on many different topics and consultations. As your views are valuable to us, please confirm below if you would be willing to be contacted again from time to time either for research or to send through consultation documents?

Yes

No

All DfE public consultations are required to meet the Cabinet Office [Principles on Consultation](#)

The key consultation principles are:

- departments will follow a range of timescales rather than defaulting to a 12-week period, particularly where extensive engagement has occurred before
- departments will need to give more thought to how they engage with and consult with those who are affected

- consultation should be 'digital by default', but other forms should be used where these are needed to reach the groups affected by a policy; and
- the principles of the Compact between government and the voluntary and community sector will continue to be respected.

Responses should be completed on-line or emailed to the relevant consultation email box. However, if you have any comments on how DfE consultations are conducted, please contact Carole Edge, DfE Consultation Coordinator, tel: 0370 000 2288 / email: carole.edge@education.gsi.gov.uk

Thank you for taking time to respond to this consultation.

Completed responses should be sent to the address shown below by 8 August 2013

Send by post to: Carole Edge, Department for Education, Area 1C Castle View House, East Lane, Runcorn, Cheshire WA7 2 GJ

Send by e-mail to: NCRlegislative.CONULTATION@education.gsi.gov.uk